

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-9. (canceled)

10. (previously presented) A magnetoresistive head comprising:
a spin valve structure; and
a pair of electrodes provided on the sides of the spin valve structure for current to flow parallel to a track width direction;
wherein the spin valve structure includes an antiferromagnetic film, a pinned magnetic layer, a free magnetic layer, and a non-magnetic layer;
wherein the pinned magnetic layer is provided between the antiferromagnetic film and the non-magnetic layer;
wherein a magnetizing direction of the magnetic layer is pinned by an exchange coupling field with the antiferromagnetic film;
wherein the non-magnetic film is provided between the pinned magnetic layer and the free magnetic layer; and
wherein the free magnetic layer has first and second free magnetic films sandwiching a non-magnetic intermediate film therebetween, the respective magnetizing directions of the first free magnetic film and the second free magnetic film are in antiparallelism, the length of the free magnetic layer in the direction of the track width is 200 nm or less, and a difference between a product of saturation magnetic flux density and a film thickness of the first free magnetic film and a product of saturation magnetic flux density and a film thickness of the second free magnetic film is within a range from 1 to 3 nmT.

11. (canceled)

12. (previously presented) A magnetoresistive head according to claim 10, wherein the magnetoresistive head is a single spin valve structure.

13. (previously presented) A magnetoresistive head comprising:
a spin valve structure; and
a pair of electrodes provided on the sides of the spin valve structure for current to flow parallel to a track width direction;

wherein the spin valve structure includes an antiferromagnetic film, a pinned magnetic layer, a free magnetic layer, and a conductive film;

wherein the pinned magnetic layer is provided between the antiferromagnetic film and the conductive film;

wherein a magnetizing direction of the magnetic layer is pinned by an exchange coupling field with the antiferromagnetic film;

wherein the conductive film is provided between the pinned magnetic layer and the free magnetic layer; and

wherein the free magnetic layer has first and second free magnetic films sandwiching a non-magnetic intermediate film therebetween, the respective magnetizing directions of the first free magnetic film and the second free magnetic film are in antiparallelism, the length of the free magnetic layer in the direction of the track width is 200 nm or less, and a difference between a product of saturation magnetic flux density and a film thickness of the first free magnetic film and a product of saturation magnetic flux density and a film thickness of the second free magnetic film is within a range from 1 to 3 nmT.

14. (previously presented) A magnetoresistive head according to claim 13, wherein the magnetoresistive head is a single spin valve structure.